



**HARTCROWSER**

Earth and Environmental Technologies

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NORTHERN WOODLAND

Hart Crowser, Inc.  
1910 Fairview Avenue East  
Seattle, Washington 98102  
FAX 206.328.5581  
206.324.9530

## MEMORANDUM

**DATE:** December 2, 1993

**TO:** Norm Linton; Potlatch Corporation  
Gary Parish; Popham, Haik

**FROM:** David Winter

**RE:** Proposed Draft Replacement for Free Phase Recovery Completion Section  
in the Draft Consent Order and Remediation Plan, Avery Landing  
J-2294-04

After considerable thought and in-house discussion we have concluded that we probably will have no success proposing an acceptance criteria completely different than the 0.1 inch of free product currently in the draft. This is because we do not have a strong technically-based argument to support our belief that such a cleanup level is neither practically achievable nor necessary for surface water protection. In most free product recovery systems, the practical life or measure of success of the system is determined either on the basis of residual product level (usually measured in wells, and dependent on the well locations) or on the amount of recovered product (usually established based on observed or historical product recovery rates).

Based on these thoughts, we propose keeping the 0.1 inch criteria in place, but offering an option to consider alternatives if the monitoring data we collect in the first year or two of operation suggest that the 0.1 criteria cannot be practically met. For example, at the end of paragraph 7.E., on page 3 of the Consent Order, and after the sentence ending "... and the recovery trench." at the bottom of page 4 of 6 on the Remediation Plan, insert the following sentences:

PAL 001712



Potlatch Corporation  
December 2, 1993

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"After collecting at least two years of recovery and monitoring data, Potlatch and CMC may, as part of the annual report, propose an alternative recovery system shutdown criterion. Such an alternative would be based on the probable decreasing product recovery rates and asymptotically decreasing rate of change in monitoring well free product thicknesses over time. A revised criterion considering recovery rate may be appropriate. If the collected data suggest that the free product recovery system in place has attained or nearly attained an asymptotic limiting recovery rate or product thickness or both, the parties to this agreement could agree to the minimum one year system shutdown, even if the free product thickness in the wells and trench exceeds 0.1 inch."

One other note: I have found in our files records of a product sample analysis from 1989 that included test results for arsenic, cadmium, chromium, and lead, plus flash point and total halogens, the information required under Subpart E - Used Oil Burned for Energy Recovery. The test results (summary attached) indicate that the product does not exceed any of the allowable levels of the constituents and properties in the specification table. Our field representative, Chris Holloway, is obtaining additional samples of the product so that we can rerun the analyses, if you wish.

I look forward to discussing these items with you.

DRFTREPLMEM

Attachment:

A - Laboratory Report Summary  
Spectra Laboratories, Inc.

Hart Crowser  
J-2294-04

**ATTACHMENT A**  
**LABORATORY REPORT SUMMARY**  
**SPECTRA LABORATORIES, INC.**



# SPECTRA Laboratories, Inc.

5013 Pacific Hwy. E. #12 • Tacoma, WA 98424 • (206) 922-5120

October 17, 1989

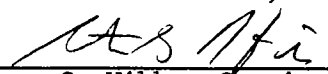
Analytical Resources Inc.  
333 Ninth Avenue North  
Seattle, WA 98109-5187  
Customer #81570

Sample ID: MW-4/5-1 3747-C  
Desc: Oil  
Spectra #27474  
RUSH

Attn: Dave Mitchell

Cadmium	(Cd), ppm	<1
Chromium	(Cr), ppm	1
Lead	(Pb), ppm	5
Arsenic	(As), ppm	<1

SPECTRA LABORATORIES, INC.

  
Steven G. Hibbs, Chemist



# SPECTRA Laboratories, Inc.

5013 Pacific Hwy. E. #12 • Tacoma, WA 98424 • (206) 922-5120

October 5, 1989

Analytical Resources Inc.  
333 Ninth Ave North  
Seattle, WA 98109-5187  
Customer #81570

Sample ID: MW 4/S-1  
ARI #3747-C  
Spectra #26941

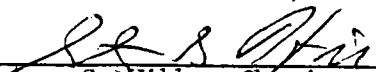
Attn: Catherine Greer

Total halogens, ppm	<1
Flash Point, PMCC °F	>210

EP Toxicity Metals, mg/l

Lead (Pb)	<0.01
Chromium (Cr)	<0.002
Silver (Ag)	<0.004
Barium (Ba)	0.005
Cadmium (Cd)	<0.005
Arsenic (As)	<0.08
Mercury (Hg)	<0.02
Selenium (Se)	<0.1

SPECTRA LABORATORIES, INC.

  
Steven G. Hibbs, Chemist